

# AHMAD OMAR AHSAN

+880 1797 997955 | [ahmadomar@iut-dhaka.edu](mailto:ahmadomar@iut-dhaka.edu) |  
[linkedin.com/in/ahmad-omar-ahsan/](https://www.linkedin.com/in/ahmad-omar-ahsan/) | <https://ahmad-omar-ahsan.github.io/>

## EDUCATION

---

**Bachelor of Science | Computer Science and Engineering** Jan. 2017 – March 2021  
Islamic University of Technology, Gazipur, Bangladesh 3.65 / 4.0

- Relevant coursework: Linear Algebra, Data Structures, Numerical Methods, Machine Learning and Pattern Recognition.

## WORK EXPERIENCE

---

**AI Engineer** Feb 2021 – June 2022  
Intelligent Machines Dhaka, Bangladesh

- Developed keyword transformer using TensorFlow for key-word classification. This model was developed to classify keywords spoken in different Bengali dialects to detect keywords spoken in sales pitch.
- Trained and deployed a text detection and recognition model using PyTorch for text classification and localization. This model was developed to extract information from hand written receipts from local markets.

**AI Intern** Nov 2019 – Jan 2021  
Intelligent Machines Dhaka, Bangladesh

- Fine-tuned Efficient-Det to detect point of sales material in the image. The model enabled the client to check how many point of sales material were deployed in the market.
- Created scripts to optimize data generation, training and testing for deep learning models.

## RESEARCH EXPERIENCE

---

**Research fellow** Jun 2022 - Dec 2022  
Hyperbolic Deep Learning for Computer Vision | Fatima Fellowship

- Hyperbolic image classification using graphs
- Extract features in the hyperbolic space and use Lorentz transformations to perform classification

**Research contributor** Nov 2020 - June 2021  
Sound Generation Group | Sound of AI

- Worked as a research contributor in one of the largest open source research project
- Developed and trained a WaveNet based encoder for sound generation
- Carried out literature review of different sound generation modules

## PUBLICATIONS

- 
- MM Morshed\*, [AO Ahsan\\*](#). **Attention-Free Keyword Spotting**. ICLR 22 PML4DC workshop. [Paper][Code]
  - MM Morshed, [AO Ahsan](#), H Mahmud, M Hasan. **Learning Audio Representations with MLPs**. Preprint. [Paper] [Code]

## ACHIEVEMENTS

---

**Hear Challenge 2021, NeurIPS 2021** Oct 2021  
HEAR evaluates audio representations using a benchmark suite across a variety of audio domains.

- 1st place: Speech Commands Full, Speech Commands 5H, Mridingham Tonic
- 3rd place: Mridingham Stroke, Beehive States

## SKILLS

---

**Languages:** Bengali (Native), English (Fluent)  
**Programming:** Python (PyTorch, TensorFlow, Weights and biases), C++, C, Java

---

\*Equal contribution